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BHCTP Monthly Discharge Monitoring Report

Month: April-15

Facility: Central Treatment Plant

Location: Bunker Hill Superfund Site

Contract Number: W912DW-13-C-0026-P00007

Total Flow For The Month From 006 Outfall: 60,867,000 gallons
Sludge pumping to CIA sludge pond: 1,908,000 gallons

Total Flow From Kellogg Tunnel: 63,056,840 gallons

Percent of Influent Successfully Treated: 100.0%

13 sample days * 6 parameters (Pb, Cd, Zn, Mn, TSS & pH) = 78 potential exceedances
78 - 0 exceedances = 78 78/78 = 100%

Results of Sampling Efforts:

All sampling has been performed in accordance with specifications and the Sampling and Analysis Plan. QC and QA samples have been taken as required. All sample analysis results may be found within this DMR.

Performance Evaluation (PE) sampling for the CTP continued, with five PE samples delivered to SVL for this reporting period. The PE samples were identified as CTPXX (random CTP sites). These samples consisted of preserved 500-ml trace metal samples to be analyzed for Cd, Pb and Zn. The PE acceptable quantitation range is listed on the 'QC' page of this DMR.

Trip blank and rinsate samples were also taken, with the results being reported on the 'PTM-004, RB, TB' page of this DMR.

Highlights of Plant Maintenance and/or Plant Optimization:

04-01-15 Performed monthly fire extinguisher inspection. All CTP fire extinguishers are fully charged and in good working condition at this time.

04-01-15 Performed monthly pump and motor inspection. All CTP pumps and motors are in good condition at this time with the exception of the Rapid Mix gear box. Gear box vibration is increasing.

04-02-15 ETS Automation performed lime silo PLC alarm failure troubleshooting and repairs. ETS was able to reconnect the lime slurry tank and lime system sump high alarms to the auto-dial alarm system. ETS also had to reconnect work station B to the PLC, as a connection conflict occurred for the third time. The work station B PLC connection error is being caused by restarting work station B hardware and a software conflict.

04-07-15 Performed quarterly AMD Direct Feed Line cleaning. The Direct Feed Line was cleaned using three in-line aggressive bullet-style pigs.

04-08-15 Performed Rapid Mix Tank draining and drain line cleaning. The Rapid Mix Tank drain has plugged with sediment. The drain was cleaned and tested prior to placing the Rapid Mix Tank back into service.

04-09-15 Chief Operator, Process Engineer and USACE COR attended the monthly process meeting. Process quality, plant operations, contract period reports, OMER projects and operator work schedules were reviewed. Process Engineer has been approved to study typical mine mill discharges in an attempt to know the effects of any chemical discharge from the newly constructed mill located at the Bunker Hill Mine. pH set point increases during April were discussed. Treated outfall and KT discharge sample analyses were reviewed. The CTP treatment process is producing excellent discharge quality at this time. The pH set point will remain at 8.4. The pH set point can be increased to 8.5 at operators' discretion. Set points above 8.5 require USACE COR approval.

04-21-15 The CTP chief operator, process engineer and USACE COR attended a mill tour at the Bunker Hill Mine. The tour included a meeting with one of the venture capital partners. The Bunker Hill Mine operators discussed all future mill operations plans and proposed startup schedules. The Bunker Hill Mine will provide notification prior to the

mill startup to allow CTP operators to sample the mill discharge.

04-22-15 The CTP was placed into shutdown mode with all KT discharge flow diverted to the lined storage pond 10:00-12:00. The city water supply was shut down by the water district. CTP lime slurry and sludge pumps are water-cooled using city supply water, which necessitated the shutdown.

04-24-15 Operators performed a complete site and component inspection after experiencing two earthquakes during the past 12 hours. No damage was found to any structures, vessels, piping, pumps or motors from the earthquakes.

04-27-15 Performed Bunker Hill pre-mill startup sampling of the KT discharge. Baseline sampling was performed to provide indication of mill discharge metals if the mill discharge is allowed to enter the KT flume.

04-28-15 Operators performed the monthly full load emergency generator run test. The emergency generator operated all CTP components for one hour as programmed with no issues.

During this reporting period:

- The Kellogg Tunnel discharge flow decreased by 4% from April 2014, from 65.6 mg to 63.0 mg.
- The Kellogg Tunnel zinc concentration decreased by 14% from April 2014, from an average of 107 mg/L to 92 mg/L.
- The CTP operating pH set point remained at 8.4.
- The flocculent dosage was increased to 3 ppm from approximately 2 ppm during the lined storage pond pumping events.
- The CTP sludge recycle rate remained at 400 gpm.
- CTP operators received no off-shift auto dialer call-out alarms.
- CTP operators performed eight pumping events from the Lined Pond.
- CTP operators performed Aeration Basin pH probe and grab sample verification twice per day.

Lessons Learned

No significant lessons to report for last month.

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
2015	4	1		2015	4	30

PARAMETER		Quantity or Loading			Quality or Concentration				FREQUENCY OF ANALYSIS	SAMPLE TYPE
		MONTHLY AVERAGE	DAILY MAXIMUM	UNITS	MINIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	UNITS		
pH	Sample Measurement				6.90		7.28		Continuous	Meter
	Permit Required				6.0		10.0			
Flow Thru Treatment Plant	Sample Measurement	2.03	2.49	mgd						
	Permit Required		Daily							
Lead Total - Pb Effluent	Sample Measurement	0.08	0.15	lbs/day		0.005	0.009	mg/L	three samples/ week	Comp 24
	Permit Required	14.8	37.0			0.30	0.60	mg/L		
Zinc Total - Zn Effluent	Sample Measurement	4.44	6.24	lbs/day		0.26	0.43	mg/L	three samples/ week	Comp 24
	Permit Required	36.2	91.3			0.73	1.48	mg/L		
Cadmium - Cd Effluent	Sample Measurement	0.115	0.170	lbs/day		0.007	0.008	mg/L	three samples/ week	Comp 24
	Permit Required	2.40	6.10			0.050	0.100	mg/L		
Manganese - Mn Effluent	Sample Measurement	220.9	424	lbs/day		12.6	21.1	mg/L	three samples/ week	Comp 24
	No Permit Required					N/A	N/A	mg/L		
Total Suspended Solids - TSS	Sample Measurement	20.9	29	lbs/day		1.2	1.6	mg/L	three samples/ week	Comp 24
	Permit Required	985	1907			20	30	mg/L		

PREPARED BY: GARY FULTON

REVIEWED BY: Mark Reinsel, Ph.D., P.E.

**NPDES DISCHARGE POINT 006
CENTRAL TREATMENT PLANT
MONTH: Apr-15**

DAY	LEAD (Pb)		ZINC (Zn)		CADMIUM (Cd)		MANGANESE (Mn)		pH	FLOW mgd	TSS		LOADING kg/day
	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day			mg/L	lbs/day	
1	0.004	0.08	0.243	4.89	0.0062	0.12	21.1	424	6.96	2.41	1.2	24.1	10.95
2										2.30			
3	0.004	0.07	0.256	4.85	0.0060	0.11	20.6	390	6.97	2.27	1.2	22.7	10.31
4										1.50			
5										1.26			
6	0.004	0.04	0.345	3.50	0.0060	0.06	10.7	109	6.97	1.22	1.2	12.2	5.53
7										2.04			
8	0.004	0.08	0.279	5.80	0.0057	0.12	4.93	102	7.03	2.49	1.4	29.1	13.2
9										1.84			
10	0.005	0.10	0.180	3.64	0.0059	0.12	7.64	154	7.12	2.42	1.4	28.3	12.8
11										2.45			
12										2.21			
13	0.005	0.09	0.224	3.80	0.0066	0.11	13.3	225	7.07	2.03	1.0	16.9	7.69
14										2.26			
15	0.005	0.08	0.247	4.45	0.0072	0.13	15.6	281	6.90	2.16	1.2	21.6	9.81
16										2.34			
17	0.004	0.09	0.268	5.48	0.0083	0.17	15.6	319	7.28	2.45	1.4	28.6	13.0
18										2.35			
19										2.07			
20	0.009	0.15	0.213	3.73	0.0078	0.14	13.1	230	7.18	2.10	1.6	28.0	12.7
21										1.63			
22	0.008	0.11	0.302	3.91	0.0073	0.09	11.6	150	7.14	1.55	1.4	18.1	8.21
23										1.08			
24	0.004	0.06	0.430	6.24	0.0078	0.11	6.31	92	7.08	1.74	0.8	11.6	5.27
25										2.16			
26										2.11			
27	0.004	0.06	0.207	3.47	0.0063	0.11	8.71	146	7.13	2.01	1.0	16.7	7.60
28										2.18			
29	0.004	0.07	0.227	3.96	0.0055	0.10	14.3	249	7.10	2.09	0.8	14.0	6.33
30										2.15			
Total	0.063	1.07	3.42	57.71	0.09	1.49	163.49	2872	91.9	60.9	15.6	272.1	123.4
Sample Events	13	13	13	13	13	13	13	13	13	30	13	13	13
Daily Average	0.005	0.08	0.26	4.44	0.007	0.11	12.6	221	7.07	2.03	1.20	20.93	9.49
Lab Detection Limit	0.004		0.003		0.001		0.004		0.01		0.800		

MIN	0.0038	0.04	0.18	3.47	0.0055	0.06	4.93	92	6.90	1.08	0.80	11.62	5.27
MAX	0.0087	0.15	0.43	6.24	0.0083	0.17	21.10	424	7.28	2.49	1.60	29.09	13.19

**KELLOGG TUNNEL DISCHARGE
CENTRAL TREATMENT PLANT
MONTH: Apr-15
Data from SVL**

DAY	LEAD (Pb) mg/L	ZINC (Zn) mg/L	CADMIUM (Cd) mg/L	MANGANESE (Mn) mg/L	pH	006 FLOW mgd	TSS mg/L	DAILY MASS LOADING kg/day
1						2.41		
2	0.621	69	0.137	70	3.01	2.30	87	757.6
3						2.27		
4						1.50		
5						1.26		
6	0.780	142	0.319	38	2.77	1.22	15	69
7						2.04		
8						2.49		
9	0.573	80	0.168	72	2.93	1.84	93	648
10						2.42		
11						2.45		
12						2.21		
13	0.533	39	0.171	73	2.92	2.03	96	738
14						2.26		
15						2.16		
16	0.559	83	0.173	74	2.90	2.34	98	868
17						2.45		
18						2.35		
19						2.07		
20	0.570	87	0.182	78	2.89	2.10	115	914
21						1.63		
22						1.55		
23	0.584	167	0.352	42	2.76	1.08	14	57
24						1.74		
25						2.16		
26						2.11		
27	0.634	80	0.161	80	2.94	2.01	125	950
28						2.18		
29						2.09		
30	0.495	84	0.163	80	2.94	2.15	107	871
31						0.00		

**PTM Effluent at Lined Storage Pond
CENTRAL TREATMENT PLANT**

Month: Apr-15

DATE	LEAD mg/L	ZINC mg/L	CADMIUM mg/L	pH s.u.	TSS mg/L
04/02/15	0.017	10.8	1.02	7.37	0.8
04/16/15	0.014	10.2	1.01	7.32	0.8
04/30/15	0.010	10.9	1.16	7.16	0.8

**RINSATE AND TRIP BLANKS
CENTRAL TREATMENT PLANT**

Month: Apr-15

**Rinsate and Trip Blank samples will be taken approximately every 20
QC events, or one each per month.**

LOCATION	DATE	SAMPLE	LEAD mg/L	ZINC mg/L	CADMIUM mg/L
Rinsate & Trip Blank					
CTP Treated Discharge		RB-04-23-15	<0.01	<0.004	<0.002
Trip Blank (D.I.water)		TB-04-23-15	<0.01	<0.004	<0.002

CENTRAL TREATMENT PLANT

MISCELLANEOUS FLOWS

Month : Apr-15

Date	KT Flow Meter Reading
3/31/2015	0
4/30/2015	63,056,840
Total	63,056,840

Date	006 Flow Meter Reading
3/31/2015	0
4/30/2015	60,867,000
Total	60,867,000

Sweeny Pump Station Reading				
Date	#1 Pump	620 gpm	#2 Pump	500 gpm
3/31/2015	170.0	Hours	785.0	Hours
4/30/2015	170.0	Hours	785.0	Hours
Total Hours	0.0	Hours	0.0	Hours
Total Flow for 004/Sweeny For The Month = 0 Gallons				

PTM Discharge Flow	
Date	Flow (gpm)
04/02/15	20.0
04/16/15	12.0
04/30/15	11.0

Date	Lined Storage Pond Water Level			
3/31/2015	1,875,000	gal	Elev. =	2270.5
4/30/2015	1,000,000	gal	Elev. =	2269.0

Bunker Hill Central Treatment Plant

Daily log April 2015

DATE	OP	INFLUENT KT	AERATION BASIN								CLARIFIER				DISCHARGE 006					RECYCLE SG		LIME SLURRY		SLUDGE PUMP		POND PUMP		SLUDGE GUN TEST		LINED POND							
			GPM	pH	a.m.				p.m.				TURB	TEMP	a.m.		p.m.			SG	GPM	SG	%solid	Injection Valve		pump #	min	ON	OFF	10' Out	20' Out	ESTIMATED					
					SET	pH1	grab	pH1	grab	pH2	grab	pH2			grab	pH3	grab	pH3	grab					TURB	FLOW								SG	Closed	Open	10' Out	20' Out
4/1	GF,GC			8.4	8.4	8.4	8.4	8.3	7.8	7.8	7.8	7.5	0.80	51	7.6	7.0	7.4	7.1	0.75	2.41	1.046	400	1.074	11.6	180/25	3	120							2270.5 (1.87mg)			
4/2	GF,SB,GC	1729	2.75	8.4	8.5	8.4	8.3	8.3	7.9	7.8	7.9	8.0	0.86	53	7.7	7.4	7.9	7.4	0.65	2.30	1.042	400	1.076	11.7	175/25	3	120							2270.5			
4/3	GF,GC			8.4	8.4	8.3	8.3	8.3	7.9	7.6	7.9	7.9	0.90	50	7.8	7.3	7.6	7.3	0.77	2.27	1.041	400	1.076	11.7	174/25	3	120							2270.5			
4/4	GC			8.4	8.5	8.5	8.5	8.5	7.9	7.7	7.8	7.6	0.74	52	7.7	7.8	7.7	7.7	0.89	1.50	1.036	400	1.075	11.6	199/20	3	30							2270.5			
4/5	SB			8.4	8.4	8.4	8.5	8.5	7.9	7.6	7.8	7.7	0.80	46	7.6	7.4	7.7	7.4	0.74	1.26	1.037	400	1.075	11.6	178/20	3	70							2270.5			
4/6	GF,SB	965	2.60	8.4	8.4	8.4	8.4	8.4	7.8	7.8	7.8	7.8	0.90	45	7.3	7.1	7.4	7.2	0.77	1.22	1.038	400	1.076	11.7	187/20	3	90							2270.5			
4/7	GF,SB,GC			8.4	8.5	8.5	8.5	8.4	7.8	7.7	8.1	7.8	0.76	45	7.6	7.4	8.0	7.2	0.64	2.04	1.050	400	1.074	11.4	143/25	1	150	5:50	12:50					2271.0 (2.25mg)			
4/8	GF,SB,GC			8.4	8.4	8.4	8.4	8.3	7.8	7.7	8.0	7.9	0.99	47	8.2	7.3	7.7	7.0	0.78	2.49	1.044	400	1.076	11.7	150/25	3	60							2270.5 (1.87mg)			
4/9	GF,SB,GC	1667	2.80	8.4	8.5	8.4	8.4	8.4	8.1	7.9	8.0	7.9	0.74	51	7.8	7.4	7.5	7.1	0.62	1.84	1.047	400	1.076	11.7	150/25	3	120	6:40	13:00					2271.5 (2.5mg)			
4/10	GF,GC			8.4	8.4	8.5	8.5	8.5	8.0	8.0	8.1	8.1	0.90	50	7.8	7.1	7.9	7.1	0.70	2.42	1.043	400	1.076	11.7	156/25	3	120	6:50	13:00					2271.0 (2.25mg)			
4/11	GC			8.4	8.4	8.5	8.4	8.4	8.0	8.1	7.9	7.7	0.63	52	7.7	7.4	7.7	7.4	0.60	2.45	1.043	400	1.076	11.7	146/25	3	120							2270.5 (1.75mg)			
4/12	SB			8.4	8.4	8.4	8.4	8.3	7.9	7.8	7.9	7.8	0.56	50	7.5	7.4	7.6	7.4	0.50	2.21	1.044	400	1.075	11.6	150/25	3	120							2270.5			
4/13	GF,SB	1590	2.85	8.4	8.4	8.4	8.4	8.4	7.9	7.8	8.0	8.0	0.80	51	7.5	7.2	7.6	7.3	0.60	2.03	1.041	400	1.073	11.3	147/25	3	120							2271.0			
4/14	GF,SB,GC			8.4	8.4	8.4	8.4	8.4	8.1	7.9	8.0	7.9	0.80	51	7.6	7.4	7.5	7.4	0.60	2.26	1.044	400	1.071	11.0	145/20	3	120							2271.0 (2.25mg)			
4/15	GF,SB,GC			8.4	8.4	8.4	8.4	8.4	8.0	8.0	8.0	8.1	0.85	52	7.7	7.3	7.9	7.3	0.77	2.16	1.041	400	1.073	11.3	156/25	3	120	7:00	13:00	10'-8"	20'-6"			2271.0			
4/16	GF,SB,GC	1576	2.89	8.4	8.3	8.4	8.4	8.4	8.0	8.0	7.9	7.8	0.79	51	7.7	7.5	7.8	7.5	0.69	2.34	1.043	400	1.073	11.3	162/25	3	120	6:00	13:00					2270.5 (1.87mg)			
4/17	GF,GC			8.4	8.4	8.4	8.5	8.5	8.0	7.9	7.9	8.0	0.85	52	7.6	7.5	7.8	7.5	0.51	2.45	1.042	400	1.073	11.3	163/25	3	120	7:00	13:00					2270.0 (1.5mg)			
4/18	GC			8.4	8.4	8.4	8.4	8.4	8.0	8.1	7.8	8.0	0.62	52	7.7	7.6	7.5	7.4	0.61	2.35	1.040	400	1.073	11.3	164/25	3	120							2269.5 (1.25mg)			
4/19	SB			8.4	8.5	8.5	8.5	8.4	7.9	7.9	7.8	8.0	0.69	52	7.7	7.5	7.6	7.5	0.55	2.07	1.045	400	1.076	11.7	170/25	3	120							2269.5			
4/20	GF,SB	1569	2.90	8.4	8.4	8.4	8.6	8.3	7.9	7.9	7.8	7.9	0.75	52	7.5	7.4	7.6	7.5	0.70	2.10	1.044	400	1.077	11.9	171/25	3	140	11:00	13:00					2269.5			
4/21	GF,SB,GC			8.4	8.3	8.3	8.4	8.4	7.8	7.9	7.7	7.6	0.80	53	7.5	7.1	7.4	7.1	0.66	1.63	1.037	400	1.075	11.6	250/25	3	60	5:45	12:00					2269.0 (1.0mg)			
4/22	GF,SB,GC			8.4	8.4	8.4	8.6	8.5	7.8	7.8	7.6	7.5	0.70	53	7.4	7.2	7.4	7.1	0.66	1.55	1.034	400	1.074	11.4	270/25	3	0							2268.5 (0.75mg)			
4/23	GF,SB,GC	785	2.89	8.4	8.4	8.5	8.5	8.6	7.7	7.8	7.6	7.6	0.60	52	7.3	7.2	7.3	7.2	0.71	1.08	1.041	400	1.074	11.4	222/25	3	30							2268.5			
4/24	GF,GC			8.4	8.4	8.5	8.4	8.4	7.9	7.9	7.9	7.9	0.90	53	7.3	7.2	7.3	7.2	0.62	1.74	1.050	400	1.077	11.9	152/25	3	150							2268.5			
4/25	GC			8.4	8.4	8.5	8.4	8.4	8.0	8.1	8.1	8.1	0.68	52	7.6	7.5	7.8	7.5	0.52	2.16	1.046	400	1.078	12.0	165/25	3	120							2268.5			
4/26	SB			8.4	8.4	8.5	8.4	8.3	7.9	8.0	8.0	7.9	0.63	53	7.6	7.4	7.7	7.5	0.50	2.11	1.043	400	1.076	11.7	174/25	3	120							2268.5			
4/27	GF,SB	1550	2.95	8.4	8.5	8.4	8.5	8.3	7.9	7.9	8.0	7.9	0.60	52	7.5	7.3	7.5	7.4	0.60	2.01	1.043	400	1.077	11.9	182/25	3	120							2268.5			
4/28	GF,SB,GC			8.4	8.4	8.4	8.5	8.5	7.8	8.0	7.7	8.1	0.72	54	7.8	7.4	7.6	7.2	0.64	2.18	1.044	400	1.076	11.7	177/25	3	120							2268.5			
4/29	GF,SB,GC			8.4	8.4	8.4	8.5	8.4	7.8	7.9	7.7	7.9	0.90	56	7.6	7.2	7.5	7.2	0.69	2.09	1.044	400	1.076	11.7	187/25	3	120							2269.0 (1.0mg)			
4/30	SB,GC	1528	2.88	8.4	8.4	8.4	8.5	8.5	7.8	7.9	7.8	7.7	0.74	53	7.8	7.4	7.6	7.3	0.71	2.15	1.043	400	1.077	11.9	170/25	3	120							2269.0			

KELLOGG TUNNEL ANNUAL DISCHARGE FLOWS 2000-2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Jan.	61,000,000	61,677,510	54,606,100	53,066,890	52,223,080	53,150,000	56,050,900	56,281,000	53,465,820	50,936,960
Feb.	57,600,000	45,584,000	52,840,000	46,493,470	48,306,920	49,860,000	51,188,000	50,511,300	49,282,209	48,146,111
March	60,730,000	57,740,360	50,452,060	60,162,290	59,852,720	58,073,000	56,332,830	65,443,650	54,578,130	61,712,540
April	68,680,000	54,846,000	65,583,230	63,335,350	50,715,310	53,775,350	72,039,280	66,636,500	61,690,530	63,055,350
May	97,719,900	57,501,901	76,082,410	63,335,350	53,245,000	54,181,650	72,027,000	63,203,308	86,680,760	70,233,580
June	69,800,000	55,835,590	67,299,960	59,532,434	50,451,170	51,750,000	68,385,600	57,981,410	82,622,590	64,623,180
July	63,698,850	53,652,330	64,820,120	66,252,746	56,538,980	55,255,000	64,054,000	58,282,900	66,324,500	61,535,000
Aug.	66,707,120	45,289,000	58,212,940	62,074,750	52,002,140	49,970,000	64,621,000	55,335,900	65,168,620	56,446,670
Sept.	55,797,530	50,276,020	60,140,460	43,789,000	49,208,020	49,987,000	54,515,270	50,471,870	61,074,020	57,006,430
Oct.	60,424,720	50,660,840	54,485,871	52,869,290	59,601,690	52,807,000	57,610,030	50,086,330	58,666,300	55,830,000
Nov.	53,408,660	50,660,840	51,072,259	47,600,000	51,948,000	50,722,600	55,191,700	50,779,040	52,041,780	54,956,800
Dec.	56,414,870	53,464,780	56,034,000	56,413,080	56,770,000	54,904,400	60,486,900	53,716,210	55,727,260	54,542,700
Totals	771,981,650	637,189,171	711,629,410	674,924,650	640,863,030	634,436,000	732,502,510	678,729,418	747,322,519	699,025,321

KELLOGG TUNNEL ANNUAL DISCHARGE FLOWS 2010-2019

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Jan.	55,503,180	61,797,170	58,434,610	61,855,400	57,478,450	58,440,540				
Feb.	50,819,910	54,556,227	57,763,170	59,383,290	54,607,950	59,767,470				
March	54,691,420	61,373,630	67,236,650	66,264,780	65,396,350	64,468,230				
April	56,255,340	65,687,340	81,233,630	69,619,100	65,618,770	63,056,840				
May	58,825,640	84,365,390	86,826,340	71,496,380	80,598,590					
June	56,770,200	79,985,540	83,440,990	64,663,900	65,623,330					
July	56,727,510	79,346,330	74,315,690	62,844,790	63,425,030					
Aug.	56,239,370	70,377,570	68,986,900	58,459,380	61,486,270					
Sept.	54,109,980	60,404,280	62,270,300	58,097,500	56,279,590					
Oct.	55,480,200	62,403,480	59,991,850	58,325,780	60,659,850					
Nov.	54,856,880	58,430,700	57,184,220	56,215,000	55,065,100					
Dec.	54,607,330	58,617,700	61,750,390	56,932,530	59,770,540					
Totals	664,886,960	797,345,357	819,434,740	744,157,830	746,009,820	245,733,080	0	0	0	0

Yellow indicates record monthly flow as well as record annual flow

KELLOGG TUNNEL ZINC DATA

Month	Concentration (mg/L)											
	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Jan.		86	81	79	63	70	61	72	57	68	41	46
Feb.		86	91	96	55	72	57	95	58	68	41	68
March		94	116	86	65	68	53	86	58	69	58	81
April		98	121	140	85	80	50	137	176	86	107	92
May		105	231	179	318	136	57	377	215	150	178	
June		107	182	118	271	143	68	347	164	106	131	
July		90	144	111	198	117	75	181	136	87	87	
Aug.		87	112	92	132	94	79	130	110	86	76	
Sept.		84	107	80	107	76	81	132	107	75	66	
Oct.	59	81	100	88	99	75	70	86	70	67	63	
Nov.	66	79	88	88	104	63	57	95	71	70	55	
Dec.	67	62	78	65	76	59	61	88	69	54	49	
average	64	88	121	102	131	88	64	152	108	82	79	72
lime usage (tons/day)		2.59	3.23	2.76	4.78	3.24	2.16	4.31	3.93	2.46	2.70	
Zinc Conc. Increase/Decrease			37%	-16%	29%	-33%	-27%	138%	-29%	-24%	-3%	-10%
Lime Usage Increase/Decrease			25%	-15%	73%	-32%	-33%	100%	-9%	-37%	10%	-100%

Bunker Hill Superfund Site							
Kellogg, Idaho							
Central Treatment Plant Review							
Month: Apr-15							
SAMPLE	DATE	PARAMETER	VALUE	QC/dup	UNITS	PRECISION	MATRIX SPIKE DATA
LOCATION			RESULTS			% RPD	% RECOVERY
006/CTP Outfall	04/01/15	Cadmium	0.006	0.006	mg/L	0.0%	103%
		Lead	0.004	0.004	mg/L	0.0%	95%
Lab Duplicate		Manganese	21.1	20.9	mg/L	1.0%	
		Zinc	0.243	0.236	mg/L	2.9%	87%
		pH	6.96	6.95	s.u.	0.1%	
		TSS	1.2	1.2	mg/L	0.0%	
PTM Discharge	04/02/15	Cadmium	1.02	1.04	mg/L	-1.9%	
		Lead	0.017	0.023	mg/L	-26.9%	
QC Sample		Manganese			mg/L		
		Zinc	10.8	11.0	mg/L	-1.8%	
		pH	7.37	7.57	s.u.	-2.7%	
		TSS	0.8	1.0	mg/L	-22.2%	
Performance	04/02/15	Cadmium	0.051	0.050	mg/L	2.0%	
Evaluation		Lead	0.309	0.300	mg/L	3.0%	
Sample		Manganese			mg/L		
(CTPXX-04-02-15)		Zinc	0.837	0.730	mg/L	13.7%	
PE Sample	04/02/15	Cadmium	0.051	0.050	mg/L	2.0%	
		Lead	0.309	0.306	mg/L	1.0%	
Lab Duplicate		Manganese	0.002	0.002	mg/L	0.0%	
(CTPXX-04-02-15)		Zinc	0.837	0.831	mg/L	0.7%	
006/CTP Outfall	04/03/15	Cadmium	0.006	0.006	mg/L	-1.6%	100%
		Lead	0.004	0.004	mg/L	0.0%	95%
Lab Duplicate		Manganese	20.6	20.7	mg/L	-0.5%	97%
		Zinc	0.256	0.259	mg/L	-1.2%	92%
		pH	6.97	6.99	s.u.	-0.3%	
		TSS	1.2	1.0	mg/L	18.2%	
Kellogg Tunnel	04/06/15	Cadmium	0.319	0.322	mg/L	-0.9%	100%
		Lead	0.780	0.790	mg/L	-1.3%	97%
Lab Duplicate		Manganese	38.2	38.2	mg/L	0.0%	95%
		Zinc	142	143	mg/L	-0.7%	
		pH			s.u.		
		TSS			mg/L		
006/CTP Outfall	04/06/15	Cadmium	0.006	0.006	mg/L	-3.2%	100%
		Lead	0.004	0.004	mg/L	0.0%	94%
Lab Duplicate		Manganese	10.7	10.5	mg/L	1.9%	104%
		Zinc	0.345	0.341	mg/L	1.2%	92%
		pH	6.97	6.98	s.u.	-0.1%	
		TSS	1.2	1.2	mg/L	0.0%	
006/CTP Outfall	04/08/15	Cadmium	0.006	0.006	mg/L	1.8%	102%
		Lead	0.004	0.004	mg/L	0.0%	97%
Lab Duplicate		Manganese	4.93	5.02	mg/L	-1.8%	103%
		Zinc	0.279	0.280	mg/L	-0.4%	94%
		pH	7.03	6.82	s.u.	3.0%	
		TSS	1.4	1.4	mg/L	0.0%	
Performance	04/09/15	Cadmium	0.050	0.050	mg/L	-0.4%	

SAMPLE	DATE	PARAMETER	VALUE	QC/dup	UNITS	PRECISION	MATRIX SPIKE DATA
LOCATION			RESULTS			% RPD	% RECOVERY
Evaluation		Lead	0.313	0.300	mg/L	4.2%	
Sample		Zinc	0.800	0.730	mg/L	9.2%	
(CTPXX-04-09-15)							
PE Sample	04/09/15	Cadmium	0.050	0.050	mg/L	-1.2%	93%
		Lead	0.313	0.319	mg/L	-1.9%	92%
Lab Duplicate		Manganese	0.002	0.002	mg/L	0.0%	95%
(CTPXX-04-09-15)		Zinc	0.800	0.823	mg/L	-2.8%	90%
006/CTP Outfall	04/10/15	Cadmium	0.006	0.005	mg/L	10.7%	
		Lead	0.005	0.004	mg/L	27.3%	
QC Sample		Manganese	7.64	7.73	mg/L	-1.2%	
		Zinc	0.180	0.178	mg/L	1.1%	
		pH	7.12	7.11	s.u.	0.1%	
		TSS	1.4	1.4	mg/L	0.0%	
006/CTP Outfall	04/10/15	Cadmium	0.006	0.006	mg/L	3.4%	97%
		Lead	0.005	0.007	mg/L	-26.1%	93%
Lab Duplicate		Manganese	7.64	7.72	mg/L	-1.0%	91%
		Zinc	0.180	0.180	mg/L	0.0%	88%
		pH	7.12	7.07	s.u.	0.7%	
		TSS	1.4	1.4	mg/L	0.0%	
006/CTP Outfall	04/13/15	Cadmium	0.007	0.007	mg/L	-1.5%	99%
		Lead	0.005	0.004	mg/L	31.1%	93%
Lab Duplicate		Manganese	13.3	13.3	mg/L	0.0%	92%
		Zinc	0.224	0.225	mg/L	-0.4%	89%
		pH	7.07	7.02	s.u.	0.7%	
		TSS	1.0	1.0	mg/L	0.0%	
Kellogg Tunnel	04/13/15	Cadmium	0.171	0.172	mg/L	-0.6%	97%
		Lead	0.533	0.543	mg/L	-1.9%	92%
Lab Duplicate		Manganese	73.1	73.5	mg/L	-0.5%	115%
		Zinc	39.3	39.7	mg/L	-1.0%	
		pH			s.u.		
		TSS			mg/L		
006/CTP Outfall	04/15/15	Cadmium	0.007	0.007	mg/L	1.4%	102%
		Lead	0.005	0.004	mg/L	19.0%	94%
Lab Duplicate		Manganese	15.6	15.7	mg/L	-0.6%	
		Zinc	0.247	0.247	mg/L	0.0%	92%
		pH	6.90	6.82	s.u.	1.2%	
		TSS	1.2	1.2	mg/L	0.0%	
Performance	04/16/15	Cadmium	0.051	0.050	mg/L	2.2%	
Evaluation		Lead	0.318	0.300	mg/L	5.8%	
Sample		Zinc	0.822	0.730	mg/L	11.9%	
(CTPXX-04-16-15)							
PTM Discharge	04/16/15	Cadmium	1.01	1.01	mg/L	0.0%	94%
		Lead	0.014	0.015	mg/L	-7.7%	94%
Lab Duplicate		Manganese	0.653	0.650	mg/L	0.5%	95%
		Zinc	10.2	10.1	mg/L	1.0%	
		pH			s.u.		
		TSS			mg/L		
006/CTP Outfall	04/17/15	Cadmium	0.008	0.008	mg/L	4.9%	99%
		Lead	0.004	0.004	mg/L	12.3%	93%
Lab Duplicate		Manganese	15.6	15.4	mg/L	1.3%	

SAMPLE	DATE	PARAMETER	VALUE	QC/dup	UNITS	PRECISION	MATRIX SPIKE DATA
LOCATION			RESULTS			% RPD	% RECOVERY
		Zinc	0.268	0.266	mg/L	0.7%	89%
		pH	7.28	7.24	s.u.	0.6%	
		TSS	1.4	1.4	mg/L	0.0%	
006/CTP Outfall	04/20/15	Cadmium	0.008	0.007	mg/L	5.3%	100%
		Lead	0.009	0.007	mg/L	28.9%	92%
Lab Duplicate		Manganese	13.1	13.3	mg/L	-1.5%	119%
		Zinc	0.213	0.212	mg/L	0.5%	87%
		pH	7.18	7.11	s.u.	1.0%	
		TSS	1.6	1.6	mg/L	0.0%	
Kellogg Tunnel	04/20/15	Cadmium	0.182	0.184	mg/L	-1.1%	100%
		Lead	0.570	0.576	mg/L	-1.0%	94%
Lab Duplicate		Manganese	78.3	78.6	mg/L	-0.4%	112%
		Zinc	86.5	87.4	mg/L	-1.0%	
		pH			s.u.		
		TSS			mg/L		
006/CTP Outfall	04/22/15	Cadmium	0.007	0.007	mg/L	0.0%	103%
		Lead	0.008	0.004	mg/L	72.1%	96%
Lab Duplicate		Manganese	11.6	11.3	mg/L	2.6%	102%
		Zinc	0.302	0.296	mg/L	2.0%	91%
		pH	7.14	7.11	s.u.	0.4%	
		TSS	1.4	1.4	mg/L	0.0%	
Kellogg Tunnel	04/23/15	Cadmium	0.352	0.351	mg/L	0.3%	
		Lead	0.584	0.582	mg/L	0.3%	
QC Sample		Manganese	41.8	42.0	mg/L	-0.5%	
		Zinc	167	163	mg/L	2.4%	
		pH	2.76	2.76	s.u.	0.0%	
		TSS	14.0	14.0	mg/L	0.0%	
Performance	04/23/15	Cadmium	0.054	0.050	mg/L	6.8%	
Evaluation		Lead	0.318	0.300	mg/L	5.8%	
Sample		Zinc	0.865	0.730	mg/L	16.9%	
(CTPXX-04-23-15)							
PE Sample	04/23/15	Cadmium	0.054	0.054	mg/L	0.0%	98%
		Lead	0.318	0.321	mg/L	-0.9%	98%
Lab Duplicate		Manganese	0.002	0.002	mg/L	0.0%	103%
(CTPXX-04-23-15)		Zinc	0.865	0.867	mg/L	-0.2%	96%
006/CTP Outfall	04/24/15	Cadmium	0.008	0.008	mg/L	-5.0%	102%
		Lead	0.004	0.004	mg/L	0.0%	98%
Lab Duplicate		Manganese	6.31	6.22	mg/L	1.4%	92%
		Zinc	0.430	0.426	mg/L	0.9%	97%
		pH	7.08	7.00	s.u.	1.1%	
		TSS	0.8	0.8	mg/L	0.0%	
006/CTP Outfall	04/27/15	Cadmium	0.006	0.005	mg/L	15.4%	102%
		Lead	0.004	0.004	mg/L	0.0%	97%
Lab Duplicate		Manganese	8.71	8.79	mg/L	-0.9%	91%
		Zinc	0.207	0.206	mg/L	0.5%	93%
		pH	7.13	7.14	s.u.	-0.1%	
		TSS	1.0	1.0	mg/L	0.0%	
Kellogg Tunnel	04/27/15	Cadmium	0.161	0.162	mg/L	-0.6%	104%
		Lead	0.634	0.634	mg/L	0.0%	99%
Lab Duplicate		Manganese	79.9	81.5	mg/L	-2.0%	

SAMPLE	DATE	PARAMETER	VALUE	QC/dup	UNITS	PRECISION	MATRIX SPIKE DATA
LOCATION			RESULTS			% RPD	% RECOVERY
		Zinc	79.8	80.7	mg/L	-1.1%	
		pH			s.u.		
		TSS			mg/L		
006/CTP Outfall	04/29/15	Cadmium	0.006	0.006	mg/L	-12.0%	104%
		Lead	0.004	0.004	mg/L	0.0%	98%
Lab Duplicate		Manganese	14.3	14.3	mg/L	0.0%	87%
		Zinc	0.227	0.230	mg/L	-1.3%	95%
		pH	7.10	7.02	s.u.	1.1%	
		TSS	0.8	0.8	mg/L	0.0%	
Performance	04/30/15	Cadmium	0.054	0.050	mg/L	7.7%	
Evaluation		Lead	0.320	0.300	mg/L	6.5%	
Sample		Zinc	0.874	0.730	mg/L	18.0%	
<i>(CTPXX-04-30-15)</i>							
006/CTP Outfall	05/01/15	Cadmium	0.007	0.007	mg/L	-4.5%	103%
		Lead	0.005	0.004	mg/L	16.9%	97%
Lab Duplicate		Manganese	15.8	16.0	mg/L	-1.3%	
		Zinc	0.238	0.242	mg/L	-1.7%	97%
		pH	2.94	2.94	s.u.	0.0%	
		TSS	0.8	0.6	mg/L	28.6%	
<i>April 2015, Completeness</i>		Cadmium	29	Valid	Total	29	
		Lead	29	Valid	Total	29	
		Manganese	24	Valid	Total	24	
		Zinc	29	Valid	Total	29	
		pH	16	Valid	Total	16	
		TSS	16	Valid	Total	16	
Monthly Performance Evaluation							
Acceptable Quantitation Range							
	Analyte	Concentration	Acceptable Quantitation Range				
		(mg/L)	(mg/L)				
	Cadmium	0.050	0.0458-0.0573				
	Lead	0.300	0.2588-0.3525				
	Zinc	0.730	0.6296-0.8395				
Note: The PE quantitation range (listed above) from our PE sample source is less than required in the contract. The contract limits (listed below) have been utilized for this evaluation.							
Note: Performance evaluation samples have been given the designation "CTPXX" for purposes of blind submission to the analytical laboratory.							
Analytical Requirements							

SAMPLE	DATE	PARAMETER	VALUE	QC/dup	UNITS	PRECISION	MATRIX SPIKE DATA
LOCATION			RESULTS			% RPD	% RECOVERY
		Quantitation		Accuracy		Completeness	
	Cadmium	≤ 0.025 mg/L		80-120%		90%	
	Lead	≤ 0.15 mg/L		80-120%		90%	
	Manganese	≤ 0.025 mg/L		80-120%		90%	
	Zinc	≤ 0.30 mg/L		80-120%		90%	
	pH	≤ 0.1 pH unit		90-110%		90%	
	TSS	≤ 15 mg/L		75-125%		90%	

Bunker Hill Superfund Site							
Kellogg, Idaho							
Central Treatment Plant Review							
Month: Apr-15							
CONCENTRATION (mg/L)							
SAMPLE	DATE	PARAMETER	SPIKE	DUPLICATE	SPIKE	PRECISION	
LOCATION			ADDED	RESULT	RESULT	% RPD	COMMENTS
006/CTP Outfall	04/01/15	Cadmium	1.00	1.03	1.03	0.9%	
MS/MSD		Lead	1.00	0.939	0.946	0.7%	
		Manganese	1.00	22.0	21.8	0.9%	Sample conc. >> spike level
		Zinc	1.00	1.11	1.12	0.5%	
PE Sample	04/02/15	Cadmium	1.00	0.994	1.02	2.2%	
MS/MSD		Lead	1.00	1.25	1.27	1.8%	
CTPXX-04-02-15		Manganese	1.00	0.967	0.991	2.4%	Sample conc. >> spike level
		Zinc	1.00	1.75	1.79	2.1%	
006/CTP Outfall	04/03/15	Cadmium	1.00	1.02	1.01	0.8%	
MS/MSD		Lead	1.00	0.954	0.948	0.6%	
		Manganese	1.00	21.6	21.6	0.0%	Sample conc. >> spike level
		Zinc	1.00	1.19	1.18	0.7%	
Kellogg Tunnel	04/06/15	Cadmium	1.00	1.30	1.32	1.1%	
MS/MSD		Lead	1.00	1.73	1.75	1.2%	
		Manganese	1.00	39.2	39.2	0.2%	Sample conc. >> spike level
		Zinc	1.00	143	142	0.8%	
006/CTP Outfall	04/06/15	Cadmium	1.00	1.00	1.00	0.0%	
MS/MSD		Lead	1.00	0.944	0.942	0.3%	
		Manganese	1.00	11.7	11.7	0.6%	Sample conc. >> spike level
		Zinc	1.00	1.27	1.27	0.0%	
006/CTP Outfall	04/08/15	Cadmium	1.00	1.02	1.02	0.3%	
MS/MSD		Lead	1.00	0.969	0.967	0.2%	
		Manganese	1.00	6.05	5.96	1.5%	Sample conc. >> spike level
		Zinc	1.00	1.22	1.21	0.5%	
PE Sample	04/09/15	Cadmium	1.00	0.986	0.981	0.5%	
MS/MSD		Lead	1.00	1.25	1.24	1.0%	
CTPXX-04-09-15		Manganese	1.00	0.953	0.947	0.6%	Sample conc. >> spike level
		Zinc	1.00	1.71	1.70	0.9%	
006/CTP Outfall	04/10/15	Cadmium	1.00	0.986	0.980	0.6%	
MS/MSD		Lead	1.00	0.932	0.931	0.1%	
		Manganese	1.00	8.70	8.56	1.7%	Sample conc. >> spike level
		Zinc	1.00	1.06	1.06	0.1%	
006/CTP Outfall	04/13/15	Cadmium	1.00	0.994	0.993	0.1%	
MS/MSD		Lead	1.00	0.941	0.936	0.5%	
		Manganese	1.00	14.2	14.3	0.2%	Sample conc. >> spike level
		Zinc	1.00	1.13	1.14	1.4%	
Kellogg Tunnel	04/13/15	Cadmium	1.00	1.14	1.14	0.1%	
MS/MSD		Lead	1.00	1.44	1.45	0.4%	
		Manganese	1.00	73.1	74.3	1.6%	Sample conc. >> spike level
		Zinc	1.00	39.7	40.0	0.8%	
006/CTP Outfall	04/15/15	Cadmium	1.00	1.03	1.02	0.9%	
MS/MSD		Lead	1.00	0.961	0.944	1.8%	
		Manganese	1.00	16.5	16.2	1.7%	
		Zinc	1.00	1.16	1.17	0.5%	
PTM Discharge	04/16/15	Cadmium	1.00	1.96	1.95	0.3%	
MS/MSD		Lead	1.00	0.951	0.949	0.1%	

		Manganese	1.00	1.60	1.61	0.2%	Sample conc. >> spike level
		Zinc	1.00	10.9	10.8	0.4%	
006/CTP Outfall	04/17/15	Cadmium	1.00	1.00	0.997	0.4%	
MS/MSD		Lead	1.00	0.945	0.938	0.8%	
		Manganese	1.00	16.2	16.3	0.3%	Sample conc. >> spike level
		Zinc	1.00	1.17	1.15	0.9%	
006/CTP Outfall	04/20/15	Cadmium	1.00	1.01	1.01	0.2%	
MS/MSD		Lead	1.00	0.930	0.927	0.4%	
		Manganese	1.00	14.1	14.3	1.3%	Sample conc. >> spike level
		Zinc	1.00	1.08	1.09	0.4%	
Kellogg Tunnel	04/20/15	Cadmium	1.00	1.19	1.18	0.7%	
MS/MSD		Lead	1.00	1.51	1.51	0.3%	
		Manganese	1.00	79.7	79.4	0.3%	Sample conc. >> spike level
		Zinc	1.00	88.8	87.8	1.1%	
006/CTP Outfall	04/22/15	Cadmium	1.00	1.04	1.04	0.1%	
MS/MSD		Lead	1.00	0.964	0.971	0.7%	
		Manganese	1.00	12.5	12.6	0.6%	Sample conc. >> spike level
		Zinc	1.00	1.21	1.21	0.4%	
PE Sample	04/23/15	Cadmium	1.00	1.03	1.03	0.2%	
MS/MSD		Lead	1.00	1.30	1.30	0.0%	
CTPXX-04-23-15		Manganese	1.00	1.02	1.03	1.5%	Sample conc. >> spike level
		Zinc	1.00	1.82	1.83	0.3%	
006/CTP Outfall	04/24/15	Cadmium	1.00	1.01	1.03	1.9%	
MS/MSD		Lead	1.00	0.961	0.978	1.8%	
		Manganese	1.00	7.30	7.22	1.0%	Sample conc. >> spike level
		Zinc	1.00	1.38	1.40	1.5%	
006/CTP Outfall	04/27/15	Cadmium	1.00	1.04	1.03	1.7%	
MS/MSD		Lead	1.00	0.980	0.966	1.4%	
		Manganese	1.00	9.94	9.62	3.3%	Sample conc. >> spike level
		Zinc	1.00	1.15	1.14	1.4%	
Kellogg Tunnel	04/27/15	Cadmium	1.00	1.20	1.20	0.1%	
MS/MSD		Lead	1.00	1.62	1.62	0.1%	
		Manganese	1.00	81.3	81.4	0.2%	Sample conc. >> spike level
		Zinc	1.00	79.5	79.9	0.6%	
006/CTP Outfall	04/29/15	Cadmium	1.00	1.06	1.05	1.5%	
MS/MSD		Lead	1.00	0.987	0.976	1.2%	
		Manganese	1.00	15.6	15.1	3.1%	Sample conc. >> spike level
		Zinc	1.00	1.19	1.18	1.0%	
006/CTP Outfall	05/01/15	Cadmium	1.00	1.04	1.04	0.4%	
MS/MSD		Lead	1.00	0.979	0.978	0.1%	
		Manganese	1.00	16.9	17.1	1.3%	Sample conc. >> spike level
		Zinc	1.00	1.21	1.21	0.4%	

CTP Mine Water Line Open Channel Inspection Form

**Note: This form should be utilized weekly during the regular channel cleanout.
Results will be include with the Daily Quality Control Report and monthly DMR.**

Date: April 2, 2015 Inspected By: Gary Coast, Steve Brunner

Item Inspected	Condition	Comments
Channel Sections and Joints	Good / Poor	<u>Check for cracks</u> <u>Ok</u>
Channel Inlet Connection @ KT	Good / Poor	<u>Check for cracks</u> <u>Ok</u>
Channel Outlet/Pipeline Inlet	Good / Poor	<u>Check for cracks</u> <u>Ok</u>
Channel Bottom (during low flows)	Good / Poor	<u>Ok</u>
Bottom Joints (during low flows)	Good / Poor	<u>Ok</u>
Trash Rack Assembly Rail Units	Good / Poor	<u>Check for corrosion and bolt tightness</u> <u>Ok</u>
Trash Racks	Good / Poor	<u>Removed debris from trash racks</u>
Parshall Flume	Good / Poor	<u>Check fiberglass and joint connections</u> <u>Ok</u>

General Comments:

Bunker mine has one pump running at this time.

The Kellogg Tunnel flow at this time is 2.49 mgd (1729 gpm), pH at this time is 2.75

All flume components are in good shape at this time with the exception of the flume staff gauge.

Alternate hand held staff gauges will be utilized to verify fume staff gauge and flow meter readings.

Ultrasonic flow meter calibration was correct.

CTP Mine Water Line Open Channel Inspection Form

**Note: This form should be utilized weekly during the regular channel cleanout.
Results will be include with the Daily Quality Control Report and monthly DMR.**

Date: April 09, 2015 Inspected By: Gary Coast, Steve Brunner

Item Inspected	Condition	Comments
Channel Sections and Joints	Good / Poor	<u>Check for cracks</u> <u>Ok</u>
Channel Inlet Connection @ KT	Good / Poor	<u>Check for cracks</u> <u>Ok</u>
Channel Outlet/Pipeline Inlet	Good / Poor	<u>Check for cracks</u> <u>Ok</u>
Channel Bottom (during low flows)	Good / Poor	<u>Ok</u>
Bottom Joints (during low flows)	Good / Poor	<u>Ok</u>
Trash Rack Assembly Rail Units	Good / Poor	<u>Check for corrosion and bolt tightness</u> <u>Ok</u>
Trash Racks	Good / Poor	<u>Removed debris from trash racks</u>
Parshall Flume	Good / Poor	<u>Check fiberglass and joint connections</u> <u>Ok</u>

General Comments:

Bunker mine has one pump running at this time.

The Kellogg Tunnel flow at this time is 2.40 mgd (1667 gpm), pH at this time is 2.2

All flume components are in good shape at this time with the exception of the flume staff gauge.

Alternate hand held staff gauges will be utilized to verify fume staff gauge and flow meter readings.

Ultrasonic flow meter calibration was correct.

CTP Mine Water Line Open Channel Inspection Form

**Note: This form should be utilized weekly during the regular channel cleanout.
Results will be include with the Daily Quality Control Report and monthly DMR.**

Date: April 16, 2015 Inspected By: Gary Coast, Steve Brunner

Item Inspected	Condition	Comments
Channel Sections and Joints	Good / Poor	<u>Check for cracks</u> <u>Ok</u>
Channel Inlet Connection @ KT	Good / Poor	<u>Check for cracks</u> <u>Ok</u>
Channel Outlet/Pipeline Inlet	Good / Poor	<u>Check for cracks</u> <u>Ok</u>
Channel Bottom (during low flows)	Good / Poor	<u>Ok</u>
Bottom Joints (during low flows)	Good / Poor	<u>Ok</u>
Trash Rack Assembly Rail Units	Good / Poor	<u>Check for corrosion and bolt tightness</u> <u>Ok</u>
Trash Racks	Good / Poor	<u>Removed debris from trash racks</u>
Parshall Flume	Good / Poor	<u>Check fiberglass and joint connections</u> <u>Ok</u>

General Comments:

Bunker mine has one pump running at this time.

The Kellogg Tunnel flow at this time is 2.27 mgd (1576 gpm), pH at this time is 2.27

All flume components are in good shape at this time with the exception of the flume staff gauge.

Alternate hand held staff gauges will be utilized to verify fume staff gauge and flow meter readings.

Ultrasonic flow meter calibration was correct.

CTP Mine Water Line Open Channel Inspection Form

**Note: This form should be utilized weekly during the regular channel cleanout.
Results will be include with the Daily Quality Control Report and monthly DMR.**

Date: April 23, 2015 Inspected By: Gary Coast, Steve Brunner

Item Inspected	Condition	Comments
Channel Sections and Joints	Good / Poor	<u>Check for cracks</u> <u>Ok</u>
Channel Inlet Connection @ KT	Good / Poor	<u>Check for cracks</u> <u>Ok</u>
Channel Outlet/Pipeline Inlet	Good / Poor	<u>Check for cracks</u> <u>Ok</u>
Channel Bottom (during low flows)	Good / Poor	<u>Ok</u>
Bottom Joints (during low flows)	Good / Poor	<u>Ok</u>
Trash Rack Assembly Rail Units	Good / Poor	<u>Check for corrosion and bolt tightness</u> <u>Ok</u>
Trash Racks	Good / Poor	<u>Removed debris from trash racks</u>
Parshall Flume	Good / Poor	<u>Check fiberglass and joint connections</u> <u>Ok</u>

General Comments:

Bunker mine has no pumps running at this time.

The Kellogg Tunnel flow at this time is 1.13 mgd (785 gpm), pH at this time is 2.89

All flume components are in good shape at this time with the exception of the flume staff gauge.

Alternate hand held staff gauges will be utilized to verify fume staff gauge and flow meter readings.

Ultrasonic flow meter calibration was correct.

CTP Mine Water Line Open Channel Inspection Form

**Note: This form should be utilized weekly during the regular channel cleanout.
Results will be include with the Daily Quality Control Report and monthly DMR.**

Date: April 30, 2015 Inspected By: Gary Coast, Steve Brunner

Item Inspected	Condition	Comments
Channel Sections and Joints	Good / Poor	<u>Check for cracks</u> <u>Ok</u>
Channel Inlet Connection @ KT	Good / Poor	<u>Check for cracks</u> <u>Ok</u>
Channel Outlet/Pipeline Inlet	Good / Poor	<u>Check for cracks</u> <u>Ok</u>
Channel Bottom (during low flows)	Good / Poor	<u>Ok</u>
Bottom Joints (during low flows)	Good / Poor	<u>Ok</u>
Trash Rack Assembly Rail Units	Good / Poor	<u>Check for corrosion and bolt tightness</u> <u>Ok</u>
Trash Racks	Good / Poor	<u>Removed debris from trash racks</u>
Parshall Flume	Good / Poor	<u>Check fiberglass and joint connections</u> <u>Ok</u>

General Comments:

Bunker mine has one pump running at this time.

The Kellogg Tunnel flow at this time is 2.20 mgd (1528 gpm), pH at this time is 2.88

All flume components are in good shape at this time with the exception of the flume staff gauge.

Alternate hand held staff gauges will be utilized to verify fume staff gauge and flow meter readings.

Ultrasonic flow meter calibration was correct.



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Kellogg ID 83837-0929

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Ferguson Contracting
901 N. Division
Pinehurst, ID 83850

Project: BHCTP

Sampled: 01-Apr-15
Received: 01-Apr-15
Reported: 02-Apr-15 13:38

LAB #	WSD0001-01	-	-	-	-	-
SAMPLE ID	006-04-01-15	-	-	-	-	-
Reporting Unit	04/01/2015 06:00	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0062 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0008 [4]	-	-	-	-
Manganese	0.0200 mg/L	21.1 [3]	-	-	-	-
Zinc	0.020 mg/L	0.243	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	6.96 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	1.2	-	-	-	-

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Project: BHCTP

Sampled: 02-Apr-15
Received: 03-Apr-15
Reported: 07-Apr-15 13:46

LAB #	WSD0066-01	WSD0066-02	WSD0066-03	WSD0066-04	-	-
SAMPLE ID	KT-04-02-15	PTM-04-02-15	QC-04-02-15	CTF906-04-02-15	-	-
Reporting Unit	04/02/2015 07:30	04/02/2015 08:00	04/02/2015 08:00	04/02/2015 07:00	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.137	1.02	1.04	0.0510	-
Lead	0.0500 mg/L	0.621	0.0174 [3]	0.0226 [3]	0.309	-
Manganese	0.0200 mg/L	69.8	-	-	-	-
Zinc	0.020 mg/L	66.9 [1]	10.8	11.0	0.837	-
Classical Chemistry Parameters (Water)						
pH	pH Units	3.01 [2]	7.37 [2]	7.57 [2]	-	-
Total Susp. Solids	5.0 mg/L	87.0	0.8 [3]	1.0	-	-

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Project: BHCTP

Sampled: 03-Apr-15
Received: 03-Apr-15
Reported: 06-Apr-15 15:14

LAB #	W500055-01	-	-	-	-	-
SAMPLE ID	006-04-03-15	-	-	-	-	-
Reporting Unit	04/03/2015 06:00	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0050 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0008 [5]	-	-	-	-
Manganese	0.0200 mg/L	20.6 [3]	-	-	-	-
Zinc	0.020 mg/L	0.256	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	6.97 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	1.2 [4]	-	-	-	-

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Project: BHCTP

Sampled: 06-Apr-15

Received: 06-Apr-15

Reported: 10-Apr-15 09:07

LAB #	W500080-01	-	-	-	-	-
SAMPLE ID	KT-04-09-15	-	-	-	-	-
Reporting Unit	04/06/2015 07:30	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.319	-	-	-	-
Lead	0.0500 mg/L	0.780	-	-	-	-
Manganese	0.0200 mg/L	38.2 [3]	-	-	-	-
Zinc	0.020 mg/L	142 [1] [3]	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	2.77 [2]	-	-	-	-
Total Susp. Solids	5.0 mg/L	15.0	-	-	-	-

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Project: BHCTP

Sampled: 06-Apr-15

Received: 06-Apr-15

Reported: 07-Apr-15 15:06

LAB #	W500079-01	-	-	-	-	-
SAMPLE ID	006-04-05-15	-	-	-	-	-
Reporting Unit	04/06/2015 06:00	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0050 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0018 [4]	-	-	-	-
Manganese	0.0200 mg/L	10.7 [3]	-	-	-	-
Zinc	0.020 mg/L	0.345	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	6.97 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	1.2	-	-	-	-

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Project: BHCTP

Sampled: 08-Apr-15

Received: 08-Apr-15

Reported: 09-Apr-15 14:17

LAB #	W500112-01	-	-	-	-	-
SAMPLE ID	006-04-08-15	-	-	-	-	-
Reporting Unit	04/08/2015 06:00	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0057 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0008 [5]	-	-	-	-
Manganese	0.0200 mg/L	4.93 [3]	-	-	-	-
Zinc	0.020 mg/L	0.279	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.00 [1] [4]	-	-	-	-
Total Susp. Solids	5.0 mg/L	1.4	-	-	-	-

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Project: BHCTP

Sampled: 09-Apr-15

Received: 10-Apr-15

Reported: 15-Apr-15 14:27

LAB #	WS00188-01	WS00188-02	-	-	-	-
SAMPLE ID	KT-04-09-15	CTP004-04-09-15	-	-	-	-
	04/09/2015 07:30	04/09/2015 07:00	-	-	-	-
	Reporting Limit					
Metals [Total] (Water)						
Cadmium	0.0100 mg/L	0.168	0.0498	-	-	-
Lead	0.0500 mg/L	0.573	0.313	-	-	-
Manganese	0.0200 mg/L	72.0	-	-	-	-
Zinc	0.020 mg/L	79.6 [1]	0.800	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	2.93 [2]	-	-	-	-
Total Susp. Solids	5.0 mg/L	98.0	-	-	-	-

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Project: BHCTP

Sampled: 10-Apr-15
Received: 10-Apr-15
Reported: 13-Apr-15 14:21

LAB #		WSD0187-01	WSD0187-02	-	-	-	-
SAMPLE ID		006-04-10-15	QC-04-10-15	-	-	-	-
	Reporting Unit	04/10/2015 06:00	04/10/2015 06:00	-	-	-	-
Metals (Total) (Water)							
Cadmium	0.0100 mg/L	0.0059 [2]	0.0053 [2]	-	-	-	-
Lead	0.0500 mg/L	0.0050 [2]	<0.0030 [4]	-	-	-	-
Manganese	0.0200 mg/L	7.64 [3]	7.73	-	-	-	-
Zinc	0.020 mg/L	0.180	0.178	-	-	-	-
Classical Chemistry Parameters (Water)							
pH	pH Units	7.12 [1]	7.11 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	1.4	1.4	-	-	-	-

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Project: BHCTP

Sampled: 13-Apr-15
Received: 13-Apr-15
Reported: 15-Apr-15 14:28

LAB #	WS00228-01	-	-	-	-	-
SAMPLE ID	KT-04-13-15	-	-	-	-	-
	04/13/2015 07:30	-	-	-	-	-
	Reporting Limit					
Metals [Total] (Water)						
Cadmium	0.0100 mg/L	0.171	-	-	-	-
Lead	0.0500 mg/L	0.533	-	-	-	-
Manganese	0.0200 mg/L	73.1 [4]	-	-	-	-
Zinc	0.020 mg/L	39.3 [1]	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	2.92 [2]	-	-	-	-
Total Susp. Solids	5.0 mg/L	96.0	-	-	-	-

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Project: BHCTP

Sampled: 13-Apr-15

Received: 13-Apr-15

Reported: 14-Apr-15 15:57

LAB #	W500227-01	-	-	-	-	-
SAMPLE ID	006-04-13-15	-	-	-	-	-
Reporting Unit	04/13/2015 06:00	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0056 [2]	-	-	-	-
Lead	0.0500 mg/L	0.0052 [2]	-	-	-	-
Manganese	0.0200 mg/L	13.3	-	-	-	-
Zinc	0.020 mg/L	0.224	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.07 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	1.0	-	-	-	-

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Project: BHCTP

Sampled: 15-Apr-15
Received: 15-Apr-15
Reported: 16-Apr-15 13:50

LAB #	W500256-01	-	-	-	-	-
SAMPLE ID	006-04-15-15	-	-	-	-	-
Reporting Unit	04/15/2015 06:00	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0072 [2]	-	-	-	-
Lead	0.0500 mg/L	0.0046 [2]	-	-	-	-
Manganese	0.0200 mg/L	15.6 [3]	-	-	-	-
Zinc	0.020 mg/L	0.247	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	6.90 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	1.2	-	-	-	-

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Project: BHCTP

Sampled: 17-Apr-15

Received: 17-Apr-15

Reported: 20-Apr-15 15:33

LAB #	W500329-01	-	-	-	-	-
SAMPLE ID	006-04-17-15	-	-	-	-	-
Reporting Unit	04/17/2015 06:00	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0083 [2]	-	-	-	-
Lead	0.0500 mg/L	0.0040 [2]	-	-	-	-
Manganese	0.0200 mg/L	15.6 [3]	-	-	-	-
Zinc	0.020 mg/L	0.268	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.28 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	1.4	-	-	-	-

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Ferguson Contracting	Project: BHCTP	Sampled: 16-Apr-15
901 N. Division		Received: 17-Apr-15
Pinehurst, ID 83850		Reported: 21-Apr-15 10:18

LAB #		WSD0330-01	WSD0330-02	WSD0330-03	-	-	-
SAMPLE ID		KT-04-16-15	PTM-04-16-15	CTPX-04-16-15	-	-	-
	Reporting Unit	04/16/2015 07:30	04/16/2015 08:00	04/16/2015 07:00	-	-	-
Metals (Total) (Water)							
Cadmium	0.0100 mg/L	0.173	1.01	0.0511	-	-	-
Lead	0.0500 mg/L	0.559	0.0137 [3]	0.318	-	-	-
Manganese	0.0200 mg/L	74.3	-	-	-	-	-
Zinc	0.020 mg/L	82.5 [1]	10.2 [4]	0.622	-	-	-
Classical Chemistry Parameters (Water)							
pH	pH Units	2.90 [2]	7.32 [2]	-	-	-	-
Total Susp. Solids	5.0 mg/L	96.0	0.8 [3]	-	-	-	-

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Ferguson Contracting
901 N. Division
Pinehurst, ID 83850

Project: BHCTP

Sampled: 20-Apr-15
Received: 20-Apr-15
Reported: 21-Apr-15 14:24

LAB #	W500356-01	-	-	-	-	-
SAMPLE ID	KT-04-20-15	-	-	-	-	-
Reporting Unit	04/20/2015 07:30	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.182	-	-	-	-
Lead	0.0500 mg/L	0.570	-	-	-	-
Manganese	0.0200 mg/L	78.3 [3]	-	-	-	-
Zinc	0.020 mg/L	66.5 [1] [3]	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	2.89 [2]	-	-	-	-
Total Susp. Solids	5.0 mg/L	115	-	-	-	-

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Project: BHCTP

Sampled: 20-Apr-15
Received: 20-Apr-15
Reported: 21-Apr-15 14:00

LAB #	W500355-01	-	-	-	-	-
SAMPLE ID	006-04-20-15	-	-	-	-	-
Reporting Unit	04/20/2015 06:00	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0076 [2]	-	-	-	-
Lead	0.0500 mg/L	0.0087 [2]	-	-	-	-
Manganese	0.0200 mg/L	13.1 [3]	-	-	-	-
Zinc	0.020 mg/L	0.213	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.18 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	1.6	-	-	-	-

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Project: BHCTP

Sampled: 22-Apr-15
Received: 22-Apr-15
Reported: 23-Apr-15 13:15

LAB #	W500391-01	-	-	-	-	-
SAMPLE ID	006-04-22-15	-	-	-	-	-
Reporting Unit	04/22/2015 06:00	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0073 [2]	-	-	-	-
Lead	0.0500 mg/L	0.0083 [2]	-	-	-	-
Manganese	0.0200 mg/L	11.6 [3]	-	-	-	-
Zinc	0.020 mg/L	0.302	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.14 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	1.4	-	-	-	-

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Project: BHCTP

Sampled: 24-Apr-15
Received: 24-Apr-15
Reported: 27-Apr-15 14:39

LAB #	W500461-01	-	-	-	-	-
SAMPLE ID	006-04-24-15	-	-	-	-	-
Reporting Unit	04/24/2015 06:00	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0076 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0018 [4]	-	-	-	-
Manganese	0.0200 mg/L	6.31 [3]	-	-	-	-
Zinc	0.020 mg/L	0.430	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.08 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	0.8 [2]	-	-	-	-

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Ferguson Contracting
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Project: BHCTP

Sampled: 23-Apr-15

Received: 24-Apr-15

Reported: 28-Apr-15 12:21

LAB #		WSD0462-01	WSD0462-02	WSD0462-03	WSD0462-04	WSD0462-05	-
SAMPLE ID		KT-04-23-15	QC-04-23-15	RB-04-23-15	TB-04-23-15	CTP06-04-23-15	-
	Reporting Limit	04/23/2015 07:30	04/23/2015 07:30	04/23/2015 06:00	04/23/2015 06:00	04/23/2015 07:00	-
Metals [Total] (Water)							
Cadmium	0.0100 mg/L	0.352	0.351	<0.0006 [4]	<0.0006 [4]	0.0595	-
Lead	0.0500 mg/L	0.584	0.582	<0.0038 [4]	<0.0038 [4]	0.318	-
Manganese	0.0200 mg/L	41.8	42.0	-	-	-	-
Zinc	0.020 mg/L	167 [1]	163 [1]	<0.009 [4]	<0.009 [4]	0.865	-
Classical Chemistry Parameters (Water)							
pH	pH Units	2.76 [2]	2.76 [2]	-	-	-	-
Total Susp. Solids	5.0 mg/L	14.0	14.0	-	-	-	-

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Ferguson Contracting
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Project: BHCTP

Sampled: 27-Apr-15

Received: 27-Apr-15

Reported: 28-Apr-15 14:28

LAB #	WSD0488-01	-	-	-	-	-
SAMPLE ID	006-04-27-15	-	-	-	-	-
	04/27/2015 06:00	-	-	-	-	-
	Reporting Limit					
Metals [Total] (Water)						
Cadmium	0.0100 mg/L	0.0063 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0038 [4]	-	-	-	-
Manganese	0.0200 mg/L	8.71 [3]	-	-	-	-
Zinc	0.020 mg/L	0.207	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.13 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	1.0	-	-	-	-

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Project: BHCTP

Sampled: 27-Apr-15
Received: 27-Apr-15
Reported: 28-Apr-15 17:34

LAB #	WSD0489-01	-	-	-	-	-
SAMPLE ID	KT-04-27-15	-	-	-	-	-
Reporting Unit	04/27/2015 07:30	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.161	-	-	-	-
Lead	0.0500 mg/L	0.634 [3]	-	-	-	-
Manganese	0.0200 mg/L	79.9 [5]	-	-	-	-
Zinc	0.020 mg/L	79.8 [2] [5]	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	2.94 [3]	-	-	-	-
Total Susp. Solids	5.0 mg/L	125	-	-	-	-

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Project: BHCTP

Sampled: 29-Apr-15
Received: 29-Apr-15
Reported: 30-Apr-15 12:13

LAB #	W500547-01	-	-	-	-	-
SAMPLE ID	006-04-29-15	-	-	-	-	-
Reporting Unit	04/29/2015 06:00	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0055 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0008 [4]	-	-	-	-
Manganese	0.0200 mg/L	14.3 [3]	-	-	-	-
Zinc	0.020 mg/L	0.227	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.10 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	0.6 [2]	-	-	-	-

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Project: BHCTP

Sampled: 01-May-15 to 30-Apr-15

Received: 01-May-15

Reported: 04-May-15 14:26

LAB #	WSE0001-01	WSE0001-02	WSE0001-03	WSE0001-04	-	-
SAMPLE ID	KT-04-30-15	CTP300-04-30-15	PTM-04-30-15	008-05-01-15	-	-
Reporting Unit	04/30/2015 07:30	04/30/2015 07:00	04/30/2015 08:00	05/01/2015 06:00	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.163	0.0540	1.36	0.0065 [3]	-
Lead	0.0500 mg/L	0.495	0.320	0.0096 [2]	0.0045 [3]	-
Manganese	0.0200 mg/L	79.9	-	-	15.8 [4]	-
Zinc	0.020 mg/L	84.3 [1]	0.874	10.9	0.238	-
Classical Chemistry Parameters (Water)						
pH	pH Units	2.94 [2]	-	7.16 [2]	7.29 [2]	-
Total Susp. Solids	5.0 mg/L	107	-	0.6 [3]	0.8 [3]	-

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